

REMARKS

I. Formal Matters.

After entry of the foregoing amendments, claims 1-28, 30 and 31 are currently pending in this application, and claim 29 is cancelled via this Amendment. As an initial matter, Applicant thanks the Examiner for acknowledging the claim to priority under 35 U.S.C. §119 and for confirming receipt of a certified copy of Applicant's priority document. In addition, Applicant appreciates the Examiner's consideration of the references submitted via an Information Disclosure Statement on February 27, 2004, as evidenced by her return of an initialled Form PTO/SB/08 A&B to the office of the undersigned.

II. Objections.

The Examiner objects to claim 2 in view of the recitations of "when the distance between the longest line segment out of line segment..." Claim 2 is presently amended to more clearly and particularly claim a perpendicular distance from a most peripheral line segment. Accordingly, withdrawal of the objection to claim 2 is respectfully requested.

The Examiner objects to claims 2 and 4 asserting that $\tan(1')$ is indefinite. Amendments to the specification (paragraph [0054]) clearly define $\tan(1')$, readily recognized by one of ordinary skill in the art as a minimum on axis viewing angle. Withdrawal of this objection to claims 2 and 4 is respectfully requested, accordingly.

The Examiner objects to claim 4 for the recitation of “the distance...becomes minimum”. Claim 4 has been amended to more clearly and particularly claim a minimum distance between two specified points. In turn, withdrawal of this objection is respectfully requested.

III. Claims.

The rejection of claim 29 under 35 U.S.C. §102(b) as allegedly being anticipated by *Sandor, et al.* (U.S. Patent No. 5,554,432) (“*Sandor*”) is rendered moot by the cancellation of such claim.

The Examiner also rejects claims 1, 5 and 6 under 35 U.S.C. §102(b) as allegedly being anticipated by *Momochi* (U.S. Patent No. 5,528,420). This rejection is respectfully traversed in view of the following remarks.

Claim 1. *Momochi* discloses a single hypothetical lens pitch of 0.2 mm (col. 10, lines 31-35). *Momochi* fails to disclose (or even remotely suggest) a lens pitch less than 0.2 mm.

In contrast, Applicant claims a lens pitch less than 0.2 mm. In order to anticipate a claim, the claimed subject matter must be disclosed in the reference with “sufficient specificity to constitute an anticipation under the statute” (MPEP §2131.03). Applicant discloses the motivation and need for the small lens pitch in the specification, for example, at paragraph [0017]. At a distance of 350 mm, a lens pitch of 0.2 mm or less, and a width of light and dark stripes no greater than the resolution of the viewer, 3D imagery is obtained for handheld viewing at arm’s length. At least for failing to disclose a 3D image display device having the element of a lens pitch less

than 0.2 mm, the rejection of claim 1 as allegedly being anticipated by *Momochi* under 35 U.S.C. §102(b) should be withdrawn.

Claim 5 and 6 are asserted as being in condition for allowance at least for their dependence from an allowable independent claim.

The Examiner rejects claims 1-28 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Ichinose* (U.S. Patent No. 4,987,487). Applicant respectfully traverses this rejection in view of the following remarks.

Claim 1. *Ichinose* discloses an equation for lens pitch as a function of pixel pitch, focal length and stereoscopic viewing distance. *Ichinose* discloses altering the emissions of pixels relative to a change in a viewer's head position to maintain 3D image visualization by the viewer (col. 4, lines 7-27). *Ichinose* implements a shift in output image as a function of head movement to maintain 3D imaging.

In contrast, Applicant claims a 3D image device with a lens pitch less than 0.2 mm. Applicant discloses the need for the small lens pitch to provide 3D imagery in a handheld display device (paragraph [0017]). The Examiner admits that *Ichinose* fails to disclose a lens pitch less than 0.2 mm (OA page 5). When the applied reference fails to teach or suggest each and every element of the claim, a *prima facie* case of obviousness cannot be made by relying on hindsight afforded by the applicant's invention (*Handosh v. Block Drug Co., Inc.*, 786 F.2d 1136 (Fed. Cir. 1986)). The Examiner relies on hindsight to assert that a lens pitch of less than 0.2 mm is

obvious in light of the equation and variables disclosed in *Ichinose*. *Ichinose* discloses a lens pitch of 0.3988 mm (col. 7, lines 24-30). *Ichinose* fails to teach or suggest a lens pitch less than 0.2 mm.

In determining whether an invention as a whole would have been obvious under 35 U.S.C. §103(a), we must first delineate the invention as a whole. We look not only to the subject matter which is literally recited in the claim in question, but also to those properties of the subject matter which are inherent and to those properties disclosed in the specification (*In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)). *Ichinose* discloses 3D imaging in a stationary device that compensates for viewer head movements to maintain 3D visualization. In contrast, Applicant's invention is directed at 3D imaging in a handheld device, wherein the display device and the viewer are connected by arm's length. In summary, *Ichinose* fails to teach or suggest lens pitch length of less than 0.2 mm. Hindsight is not permissible in establishing a *prima facie* case of obviousness. Taken as a whole, a lens pitch of 0.3988 mm in a device directed at adjusting the display as a function of viewer head movements does not render a lens pitch length of 0.2 mm as obvious. In view of the preceding remarks, withdrawal of the alleged obviousness rejection of claim 1 over *Ichinose* under 35 U.S.C. §103(a) is believed to be in order.

Claim 3 contains the element of a lens pitch less than 0.124 mm. As discussed above, *Ichinose* fails to disclose a lens pitch less than 0.2 mm. Therefore, the arguments presented in the traversal of claim 1 are hereby asserted for claim 3, and withdrawal of the alleged obviousness rejection of claim 3 over *Ichinose* under 35 U.S.C. §103(a) is believed to be in order.

Claim 4. *Ichinose* discloses altering the emissions of pixels relative to a change in a viewer's head position to maintain 3D image visualization by the viewer (col. 4, lines 7-27). *Ichinose* implements a shift in output image as a function of head movement to maintain 3D imaging. *Ichinose* discloses a normal distance of 500 mm from the display device to the viewer.

In contrast, Applicant claims a minimum normal distance from the display panel to the viewer (ND), for which 3D imaging is still achieved, of 213 mm or less, wherein the lens pitch length L satisfies the equation:

$$L \leq 2 \times ND \times \tan(1'),$$

where 1' is the minimum on axis viewing angle.

When the applied reference fails to teach or suggest each and every element of the claim, a *prima facie* case of obviousness cannot be made by relying on hindsight afforded by the applicant's invention (*Handosh v. Block Drug Co., Inc.*, 786 F.2d 1136 (Fed. Cir. 1986)). The Examiner relies on hindsight to assert that a lens pitch satisfying the equation above for a minimum distance of 213 mm is obvious in light of the equation and variables disclosed in *Ichinose*. *Ichinose* fails to teach or suggest a maximum lens pitch for a minimum distance, ND=213 mm, and a minimum viewing angle of 1'.

In determining whether an invention as a whole would have been obvious under 35 U.S.C. §103, we must first delineate the invention as a whole. We look not only to the subject matter which is literally recited in the claim in question, but also to those properties of the

subject matter which are inherent and to those properties disclosed in the specification (*In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)). *Ichinose* discloses 3D imaging in a stationary device that compensates for viewer head movements to maintain 3D visualization (col. 1, lines 48-51; col. 2, lines 10-11). In contrast, Applicant's invention is directed at 3D imaging in a handheld device, wherein the display device and the viewer are connected by arm's length. *Ichinose* fails to teach or suggest a lens pitch satisfying the above equation for a minimum distance of only 213 mm. Taken as a whole, a lens pitch satisfying the above equation for a minimum distance of only 213 mm is not obvious over *Ichinose*, which discloses compensating 3D imaging relative to viewer head movement, under 35 U.S.C. §103. Accordingly, withdrawal of the rejection of claim 4 over *Ichinose* under 35 U.S.C. §103(a) is believed to be in order and is hereby respectfully requested.

Claim 2. *Ichinose* discloses altering the emissions of pixels relative to a change in a viewer's head position to maintain 3D image visualization by the viewer (col. 4, lines 7-27). *Ichinose* implements a shift in output image as a function of head movement to maintain 3D imaging. *Ichinose* discloses a normal distance of 500 mm from the display device to the viewer.

In contrast, Applicant claims a normal distance from the display panel to the viewer (OD), for which 3D imaging is still achieved, of 350 mm or less, wherein the lens pitch length L satisfies the equation:

$$L \leq 2 \times OD \times \tan(1'),$$

where $1'$ is the minimum on axis viewing angle.

The arguments for traversal of the rejection to claim 2 are analogous to the arguments for claim 4, and are hereby asserted. Accordingly, withdrawal of the rejection to of claim 2 over *Ichinose* under 35 U.S.C. §103(a) is believed to be in order and is hereby respectfully requested.

New claims 30 and 31 contain the subject matter of independent claims 1 and 2, and the subject matter previously disclosed of a handheld 3D device, but not claimed (paragraph [0017]). None of *Sandor*, *Momochi* or *Ichinose* discloses the subject matter of 3D imaging in a handheld device. In fact, *Ichinose* teaches away from said claims, by providing compensation for a change in viewer head position relative to the 3D display screen, where the viewer and the display screen are separated by 500 mm or greater.

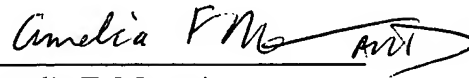
In view of the preceding amendments and remarks, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephonic interview, she is kindly requested to contact the undersigned at the local telephone number listed below.

AMENDMENT UNDER 37 C.F.R. §1.111
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The USPTO is directed and authorized to charge all required fees (except the Issue/Publication Fees) to our Deposit Account No. 19-4880. Please also credit any over-payments to said Deposit Account.

Respectfully submitted,

A handwritten signature in cursive script, reading "Amelia F. Morani", followed by a large, stylized flourish or loop.

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